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ABSTRACT

The role of the university in national development, the relationship between undergraduate and graduate instruction, the value and place of interdisciplinary studies, and the interconnections between academic objectivity and moral purpose are discussed. The paper was delivered for an Indonesian audience but universal problems are addressed. Further consideration is given to equity and employment, development of regional universities, problem oriented education, curriculum reform, citizen employability, and the learning capacity of a nation. (LBH)

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Some Thoughts on Higher Education

Soedjatmoko

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Some Thoughts on Higher Education

Soedjatmoko

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FOREWORD

In his typically modest way, Soedjatmoko has provided a modest title for his paper. A more accurate title might be "Some Rather Profound Thoughts on the Relationship of Higher Education and Society."

The extended title does more justice to what Soedjatmoko has to say. In brief compass he has said some sensible things about the role of the university in national development, the relationship between undergraduate and graduate instruction (which he calls first- and second-level higher education), the value and place of interdisciplinary studies, and the interconnections between academic objectivity and moral purpose.

These are no small themes but Soedjatmoko is no small person. Profoundly Indonesian, he is a world citizen. Effectively a social planner, he is also a philosopher. A sensitive man, he has plenty of moral iron in his spine.

This paper was delivered for an Indonesian audience, but he speaks to universal problems of structuring and reorienting higher education so as to be practical and useful but at the same time imaginative, objective, and universal. All these

qualities run like threads through this paper. The International Council for Educational Development is pleased to make this important presentation available to its special audience.

James A. Perkins, Chairman
International Council for
Educational Development

Some Thoughts on Higher Education

In the last few years we have witnessed significant efforts to adjust the university system to the requirements of national development. Universities have started to play an active role in regional development planning, in the collection and evaluation of data needed in the planning process, while some of their research has drawn attention to both neglected and new problems. Through the various consortia, the universities are still engaged in curriculum reform with a view to updating them as well as relating them more closely to the Indonesian situation. A beginning has also been made with the institution of KKN (study-service) at all universities. Furthermore, it can be expected that university development will be guided by the particular needs of the region in which each university is located. Recent statements by both the Minister of Education and the Director General of Higher Education, enunciating a five point program[+], and the statement by the

[+]This program aims at strengthening capabilities in 5 basic areas:
[1]The university's innovative capacity with regard to modernization and development.
[2]Research and the community and national service role of the university.
[3]Upgrading and development of teaching staff.
[4]Mental attitudes of teaching staff and students with regard to the realization of *Pancasila* (State philosophy).
[5]Student guidance with regard to aspects of personal development and university life as an educational and scientific community.

President of the Republic of Indonesia on the occasion of the 25th anniversary of the University of Indonesia, make it clear that this process of adjustment to development needs will be continued.

The ideas and suggestions contained in this paper are meant as a modest contribution by a relative outsider to the rethinking of the role of the university, its structure and its content, which inevitably accompanies the development process. In order to facilitate focusing on somewhat longer range problems and to free the mind from a number of present constraints, this paper assumes that university salaries have been adjusted to realistic levels, thus removing the need for academic moonlighting and the indiscriminate chasing of research money. It also assumes an intellectual climate conducive to vigorous academic life.

EQUITY AND EMPLOYMENT

As reflected in the Second Five Year Plan, and as in other large and populous countries, the twin problems of equity and employment have in the last few years come to join the concern for economic growth at the center stage of the development effort. In part this is the result of the impact of both the present rate of population growth and the lowering of the median age of the Indonesian population on the size of the labor force. Second, it has become increasingly clear that economic growth by itself, if pursued in what used to be a colonial economy, may lead to serious disparities, constituting threats to social cohesion and stability, unless growth is accompanied by structural change in a number of areas. The growing preoccupation with problems of equity does therefore not only flow from Indonesia's commitment to build a just and prosperous society; it also stems from the

awareness that staying within the limits of tolerable inequities is a condition for the maintenance of the momentum of the development thrust achieved so far.

It may therefore be useful to draw up, in a rather provisional way, a checklist of problems that have a bearing on both employment and equity as well as implications for higher education. Three of these problems are structural in nature. There is in the first place, as a result of both geography and colonial history, the imbalance between Java and the other Islands; second, the urban-rural dichotomy that has perennially plagued the Indonesian economy; and third, the structural dualism characteristic of a colonial economy, narrowly oriented toward export of primary products, in which a more efficient foreign dominated modern sector dictates speed and direction of the whole economy of the colony.

As to the first problem, to overcome the imbalance in the relationship between Java and the other islands, a massive regional development effort is called for. This requires policies to reduce the overpopulation in Java through transmigration and family planning on the one hand, and policies to reduce the labor shortage in the islands outside Java on the other, linked with the development of potential growth centers on those islands. Such policies, in conjunction with appropriate social and cultural infrastructure, including strong regional universities, should also gradually reverse the traditional flow of the most dynamic and talented people from the provinces to Java and Jakarta. Regional development policies will also have to encompass the marine resources of provinces consisting of small islands, and special efforts to break the excessive isolation of some provinces through proper resource development and transportation policies.

Second, overcoming the perennial urban-rural imbalance will require continued emphasis on rural development, together with changes in the terms of trade between urban and rural sectors which would put an end to the continuous exploitation, through relative prices, of the countryside for the benefit of the cities. The universities have an especially important role to play here; one, however, which would require much more fundamental university reform.

The third structural imbalance to be corrected involves the transformation from a colonial enclave economy toward a national growth economy. The main vehicle for this structural transformation is the development of indigenous entrepreneurship and employment policies. Such policies would also correct and maintain important ethnic balances in Indonesia's pluralistic society. These are two problem areas to which the universities should pay a great deal more attention in terms of research, formulation of policy problems involved, as well as in terms of the motivation toward entrepreneurship of their own graduates.

In addition, equity in Indonesia is also determined by the manner in which employment is handled. Rapid population increase, as well as the lowering of the median age of the population is creating unprecedented pressures for a continuous and massive increase in employment opportunities. As stated before, this will require emphasis on employment-oriented development policies in the urban, but especially in the rural sector. It will require adjustment in the location of investments, developing more options in the choice of appropriate technology and of production processes, as well as policies that give clear priority to investments in labor intensive industries. It requires a system of higher education which understands the priority of such an employment orientation in all sectors of development and their practical

implications, as well as a system capable of improving the employability of its graduates. It should be capable also of adjusting itself to meet new employment opportunities that are both a result of and a requirement for development.

Another aspect of the equity problem is income distribution and the distribution of productive wealth. Proper fiscal and wage policies are important and will meet these problems to an important extent. Employment creation, especially in the poorest part of the population, will have to supplement this approach. It is becoming increasingly obvious that the distributive aspects of development and the choice of the pattern of growth are, in a country like Indonesia, inseparably linked together. The universities should be capable of dealing with the problem of income distribution in that broader context.

There are three additional aspects to the problem of equity. One is equal protection under the law, including equal access to the processes of justice. The second is equal access to educational and employment opportunities. The third is equal access to decision making. Here too the university could and should play a more effective role. Without it, the universities would inevitably serve to perpetuate existing and growing inequities.

DISTRIBUTION AND ACCESS

The nature of the employment and equity problem outlined here suggest the need to emphasize and speed up the development of the regional universities. Present government policies abandoning the concept of giving priority to so-called centers of excellence, and the drive for regional specialization in response to the needs and growth potentialities of each

specific ecosystem is already a welcome step in this direction. It is also obvious that moving in this direction, the aim should be above all to provide high quality education on the tertiary level in all regions. The analysis of the equity problem also shows that unless special policies are adopted, the cost of nigher education is bound to exclude applicants from the poorer sections of society. It may therefore be necessary to establish student loans for this group, in addition to the scholarships that are now available. The scholarships could then increasingly be used for special purposes, for instance, to ensure that the composition of both student body and faculty of each university reflects a proper ethnic balance, or to induce students to choose less popular but important professions, or for inter-university technical assistance arrangements. It is obvious that the problems of employment and equity have other implications as well for the universities. They also bear on university structure, academic content, and the quality and quantity of capabilities and higher skills that have to be developed through the university system. This shows how essential and how wide ranging is the role of the universities in the structural transformation needed for the realization of Indonesia's national aspirations for a just and prosperous society.

RANGE AND STRUCTURE OF THE UNIVERSITY

Broad as the requirements mentioned so far are, which the universities have to be able to meet, they only constitute one part of the roles higher education has to play in the development process. These requirements deal so to speak with the internal problems of development.

At the other end of the spectrum of capabilities higher education has to be able to develop are those requirements

that have to do with the maximization of Indonesia's independence and freedom of choice, especially in this interdependent world.

This requires that Indonesia, over and above its general development effort, develops certain minimum capabilities in the area of science and technology, industry and security, as well as in the area of certain basic supplies. The effort to reduce dependency on food, fertilizer, cement, energy, and to retain adequate control of national resources, both renewable and non-renewable, are examples of this desire. Also, breakthroughs in the development of the intermediate technology, appropriate to a broadly based, employment-oriented development effort will require continued access—and the capability to utilize such access—to the most recent advances in science and technology anywhere in the world. Such capability is also required in order to enable Indonesia to change as rapidly as possible its subordinate position in the international division of labor, so as not to remain a mere producer of raw materials and a market for other countries' finished goods, at increasingly disadvantageous terms of trade. This means the capacity for rapid industrialization, more speedy transfer of technology and know-how, but also the technical capability to deal on equal terms with foreign governments, international agencies and multinational corporations. A nation's capability in the area of international competition is in considerable part dependent on the quality of its universities. This also applies to the field of international cooperation. It is now quite clear that no viable new international system in the economic, monetary and resource field, capable of reducing the traditional disadvantages for the Third World, can be worked out without the consent and participation of the developing nations. There is also a new need for a whole range of functional transnational organizations to deal with the many new problems of a global nature.

Countries like Indonesia need to develop their capabilities to deal with these new and complex international questions on an equal footing with other countries, not only in terms of general principles, but also at the technical and operational levels. All this, then, will require on the part of the universities a capacity to respond to internal developmental problems of poverty and inequality, and at the same time a capacity to respond to probiems of reducing external dependency. The width of the spectrum of capabilities Indonesian universities must develop raises the question whether these widely divergent, almost opposite requirements should be pursued with a double track system—i.e., through two different types of universities or, whether it would be desirable to accommodate these almost conflicting demands within a single system of higher education.

Indonesia's own colonial experience with dual track systems, and the more recent experience of some African countries tend to show how the more prestigious track draws away the best talents from the other track, leaving in the end the second subsystem to wither on the vine. A double track system is also bound to perpetuate even more the very structural and other social inequities that the university system is supposed to help overcome. All this then suggests a single system and a well-rounded, high quality basic higher education at universities in all parts of Indonesia. Therefore the abandonment of the centers of excellence concept—especially given Indonesia's new situation of fewer financial constraints—is a welcome and necessary development. The broad range of responses at both the internal and the international end of the spectrum, which the university is expected to make, raises a number of important structural problems for the university. One of these is the question to what extent higher education in Indonesia should become

more problem-oriented, and how it should structure itself to that end.

PROBLEM–ORIENTED OR DISCIPLINE–ORIENTED

While there is a general consensus that higher education should adjust itself more effectively to the development problems of the country, there is less agreement about how and to what extent it should be achieved. An extremely challenging proposal, drawn primarily from Latin American experience, has been made by Michael P. Todaro and colleagues*, which put the task of identifying and solving developmental problems at the center of university work toward national development. His model for a "university for national development," restructures the university around four major problem areas. Each problem area is handled by a university division which cuts through the more traditional compartmentalization of the university.

Problem Area	*University Division*
Agricultural Production and Distribution (Food, Nutrition, and so on)	Division of Agricultural Production and Supply
Economic and Social Affairs (Poverty, Social Justice, Distribution of Income, and so on)	Division of Economic and Social Affairs
Social Services: Health Education	Division of Health Division of Education
Cultural Development and Identity	Division for Cultural Affairs

*"Education for National Development: The University," Michael P. Todaro and Colleagues in *Education and Development Reconsidered*, ed. by F. Champion Ward. New York: Praeger Publishers, 1974.

University Division	*Constituent Departments*
Agricultural Production and Supply	Production (by product type and condition) Policy (resource use, prices, wages, finance, mechanization, and so on) Supply (storage, processing, distribution, marketing, and so on) Education (teacher education; formal curricula and institution; nonformal systems)
Economic and Social Affairs	Population Problems Poverty and Unemployment Social Justice: Institutions Rural and Urban Development Education for Development Social and Economic Policy
Division of Health	Medicine Nursing Medical Assistant and/or Nurse Practitioners Auxiliary
Cultural Affairs	Languages Cultural Studies Arts

It should be noted that the four problem areas mentioned in the Todaro model cover what I have called the internal development end of the spectrum. It would be relatively easy to expand the range of problem areas so as to cover the other end of the spectrum as well.

A TWO–TIER UNIVERSITY

The question which concerns us, however, is another one. A radical reorganization of the university structure around such problem areas would most likely considerably increase the

developmental effectiveness of the university as well as of its graduates. However, the university is not only concerned with the application of existing knowledge to problems. It is also committed to add to the existing stock of knowledge, and to develop the theoretical structures that make new knowledge meaningful and capable of suggesting lines for further investigation.

Furthermore, a continuous effort is needed to incorporate the most recent advances in science and technology into the fund of Indonesia expertise, and to relate them to Indonesian needs. It should also be realized that our knowledge and understanding of our society is still very limited, and while problem-oriented research and problem-solving activities are important and have to be stepped up considerably, this should not be done at the expense of the continuous search for data needed to enhance our understanding of our own society. Already the relatively easy availability of research funds for problem-oriented research has started to distort the balance between autonomous, university-initiated research and commissioned research, usually of a short term, problem-solving character. It has even begun to threaten the teaching function at a number of universities.

The continued expansion of systematic knowledge and the maintenance of academic rigor, obviously, require the preservation, at least in part, of the traditional discipline-orientation of the university. The need for more effective problem-orientation at the same time suggests a two-tier structure. The lower tier would consist of the regular *sarjana* (graduate)-training, possibly somewhat shorter. The low degree of internal efficiency in a large number of departments at many universities certainly seems to make this not only possible, but also desirable. The second tier would consist of a large variety of post-graduate institutions, open

to persons who after their *sarjana* degree want to acquire their Ph.D. in order to devote their life to research and/or university teaching. Manned by a small core of permanent staff, these institutes should be multi-disciplinary and development-oriented, insofar as possible covering the spectrum from rural and community development (its appropriate technology), to cultural problems of identity and motivation, to the area of high technology.

It is these institutions which should undertake the continuous research along the whole range of equity and employment problems. They should also accept commissioned research, leaving the first tier free to concentrate on its teaching function and on conducting research for instructional purposes, as well as basic, autonomous, discipline-oriented research. The appointment, at some stage, of an Assistant Rector for Research, next to the Assistant Rector for Academic Affairs, would also help to keep in balance competing research functions of the university. The second tier should be the locus of practical innovation, experimentation and the linkages with the international scientific and technological community.

The institutes would also be the proper location for bringing in senior elements from government and business who have reached, or are close to, retirement age, and who could, because of their experience and intellectual qualities, contribute to the overall capabilities of the institute. This would strengthen feedback from governmental and business experience into the university, which so far has been inadequate. Some of these institutes could maintain close links with the consumers of their research as well as with the graduate of the university, thus enabling the university continuously to adjust itself to shifting manpower demands, without upsetting the regular teaching function of the

university. These institutes could even develop experimental programs toward incorporating work experience into study program, which, after proven suitability, could be transferred to the first tier.

Such a two-tier system would also make possible greater flexibility in responding to either an over- or undersupply of particular skills. It may at some point become desirable to break the continuity of the academic ladder, by making a two- or three-year work period obligatory before applications to post-graduate institutions for training toward a career as a university teacher or a professional researcher are considered. This would reduce the applications to those who are most highly motivated to pursue an academic career.

There is another important function which institutes at the second tier could perform. It is too early to make any final judgement, but one has the impression that study-service (KKN) so far has had little impact on curriculum reform and on improving the relevance of the courses.

One additional important function, therefore, which might be performed by the institutions at the second level, would be the collection and analysis of observations, experiences and data, from the students involved in study-service, which could, in suitable form, be fed back into the university curriculum.

CURRICULUM REFORM AS A CONTINUOUS PROCESS

This brings us to the final, but no less crucial function of the second tier institutions, i.e., providing continuous feedback to the first tier. Institutionalized this way, this feedback could significantly heighten the quality, up-to-dateness and

relevance of the university curricula for national development.

This feedback capacity could be further enlarged, if the regular teaching staff would be obliged to spend some time, at regular intervals, at one of these post-graduate institutions, in order to participate in ongoing research and experiments, to do his own research, as well as to familiarize himself with the new teaching materials developed from the data brought together by the institute. In addition, career penalties should be given to those teaching staff who fail to make regular adjustments to their syllabus and their compulsory reading list.

Furthermore, relevance of the curriculum could improve considerably if in all disciplines discussion of the problems of employment and equity in Indonesia, as they relate to that particular discipline, were made obligatory. Except maybe in disciplines like mathematics and physics, all disciplines have a connection with some aspects of these two problems. It would be very important for students of technology to know, for instance, how technology relates to man's social purposes, and to realize that any choice of technology has its social implications, ranging from effects on employment, economic dualism, to consumption patterns.

Likewise, such discussions in the economics and social science departments would focus greater attention and develop greater sensitivity to structural and other social factors and their policy implications in the pursuit of development goals. In the cultural sciences it would focus attention on the much neglected area of the living cultural problems of a transitional society. The impact of communications technology, for instance, on economic stratification, on culture-change and identity, on problems like the cultural

impoverishment of the *desa* (village community) and on employment, but also, for instance, on the growth of drama, are problems that so far have passed most departments of letters by. It would not be too difficult to identify the relevance of most disciplines for many development problems.

Curriculum reform as a continuous process, together with the changes in structure suggested here, would be conducive to the development of a built-in capacity within each university, for continuous innovation and adaptation to a rapidly changing social context, and in general, for the continuous self-renewal of the university. This would also gradually move the locus of responsiveness to new societal needs, increasingly, from the Ministry of Education to the universities themselves, of course, within the general policies and resource allocations of the ministry.

In this way the university could also overcome the rigidity and the inadequate responsiveness to changing societal needs, which has characterized so many of our universities.

We should continue to be mindful of the fact that it was this rigidity and the lack of concern for new and urgent manpower needs on the part of the universities that led almost all ministries to set up their own academies, which now fortunately are in the process of being brought back into the fold of the university system. Post-graduate institutions again could provide the linkage here with the needs of the various ministries by developing suitable pre-service training.

This system would also free the university in another way. Building on experimental programs of the institutions, the university could enlarge more rapidly the number of courses offered within each department, and even establish new

departments, properly adapted to Indonesian needs and problems on both the national and the regional level. Coupled with a more rapid shift to a credit system, as well as with a highly overdue opportunity for students to cross departmental boundaries in the choice of their course package, the university could finally overcome the uniformity of its products in each profession, as a result of which all graduates seem to be armed with the same substantive knowledge, and all showing the same areas of ignorance and weakness. In this way the universities would make available to the nation a much greater range of capability and specialization. It would also improve the employability of its graduates.

EMPLOYMENT AND EMPLOYABILITY

The university's contribution to the national requirement of creating at least 30 million new job opportunities in the next 30 years would lie in the first place in the provision of the highly skilled manpower needed to speed up the general development process; second, in helping develop more labor-intensive alternatives through appropriate choices of technology and production processes; third, in conducting research into opportunities and problems of indigenous entrepreneurship especially in the rural sectors and small urban entrepreneurs; fourth, by training graduates who are aware of the relationship between their particular discipline and the employment and equity problems in Indonesia; fifth, by continuously broadening or helping to broaden the types of skills for which training is offered at the tertiary level.

However, one important reason for the difficulties many graduates have in finding suitable employment is the simple fact that they are often underqualified. Nevertheless, feeling no responsibility for their students, once they have become

graduates, the universities keep on grinding them out. Making the university share, at least for some period, responsibility for the suitable placement of their graduates, would soon force these universities to improve their employability, the quality of the teaching, and to become more sensitive to the needs of their consumers. The establishment of a placement bureau attached to the Rector's office, which would also regularly publish lists of graduates, the title of their *sarjana* (graduate) thesis and their area of specialization, would quickly show up weaknesses within each university needing correction.

A few words should be said about the career expectations and orientation toward the future—their own as well as that of the Nation—of the students and graduates. Even a superficial observation makes clear that most are thinking of a government career and life in one of the big cities, preferably Jakarta. On the part of the universities no discernible attempt has been made to influence such preferences. Nevertheless a serious program will have to be developed that could help make the students realize that for a majority of them their future lies outside government service and outside the few big cities. It is clear that Indonesia's future will to a very large extent depend on what we will be able to achieve in the way of development in the small towns, in the rural areas, in the islands outside Java, in and on the seas in and around Indonesia, and in the private, non-governmental sphere.

The obligatory inclusion of problems of development, of equity and employment in the curriculum, mentioned earlier, would be an important step in bringing this home to the students. It is within this context that the recent adhortations of President Suharto to include discussions of the *GBHN* (long-term objectives) *Repelita* (five year plan) and

Pancasila in each curriculum are of particular importance. A clearer vision of the future of the country, its longer range problems and requirements, on both a national and a regional level, will help the students to relate their own career choices and work locations to the broader interests and growth tendencies of the country, and may lead to their movement away from the big cities. Compulsory study-service would, in addition, give the students a set of experiences that would strengthen this process. Nevertheless it should be realized that without corresponding changes in the reward system no lasting effects can be expected.

Attitudinal change among the students will need this kind of reenforcement mechanism. Likewise it won't be sufficient only to reach the students. Their parents' perceptions of the future will also have to be changed, and a continuous effort by both the government and the universities in the area of public education on this problem will be required.

It might be advisable to develop—experimentally at first, to be sure—courses and workshops which aim at developing and strengthening the student's capacity to look for entrepreneurial opportunities in his own environment, at each successive stage of the development process, and to develop pride in the notion of creativeness, innovativeness, personal self-reliance and self-employment, thus radically changing the role-perception of university graduates, in line with the country's need. Likewise, study-service students should be sensitized to the point where they look at the village to which they are sent, not with the eyes of the *lurah* (chief of the village), or the eyes of an administrator, but rather with the eyes of an entrepreneur looking for growth opportunities and potentials of the village. The need for such experiments is of course not limited to higher education. It applies to the whole educational system.

"THE LEARNING CAPACITY OF A NATION"

The teaching roles universities will have to play are not limited to their own students. Increasingly the need is being felt for a continuous effort to strengthen what might be called "the learning capacity of the nation." This capacity is of course not limited to the universities themselves but encompasses the ability of a range of institutions at all levels of society to absorb and utilize creatively new information and skills; gives information about their rapidly changing societies as well as about the great changes in the international environment, and in the state of science and technology, directly affecting their societies and their development efforts. We are concerned here with the government bureaucracy, political parties, the press and communications media in general, the formal and non-formal educational systems, the business world, and the voluntary associations of various kinds. The universities must be able to respond to their needs of continuous upgrading and updating.

In addition, it should be realized that as the median age of the population in Indonesia is going down, the social pressures exerted by an increasingly large youth cohort on jobs and careers will make early retirement policies in a number of areas inevitable. Especially for civil servants early preparations should be made for a two-career life. University facilities for the retraining of such people would be an important contribution to the employment and equity problem.

Finally, development is not merely an economic process. The improvement of living conditions as a goal has to make sense in terms of the broader purposes of society, if motivations for development are to be maintained. Almost all developmental decisions have ethical implications which in

the longer run will be of great importance. A sense of moral direction, cultural continuity, and a self-image and identity as a nation, but also the capacity to relate economic and social goals to moral purposes are crucial elements in any sustained development effort.

Our universities should be more effective than they have shown themselves so far in relating the study of the humanities to both the "little" and the "great" moral questions regarding social purposes and national goals, including equity, in a national, regional, and global context; questions also regarding the search for a more humane society in an increasingly technology-dominated environment, even in the Third World, which are thrown up by the pursuit of development goals.

This means, in short, the need to strengthen the national capacity for moral reasoning in relation to the development effort.

In addition, the viability of many developing nations on the road of development as well as their capacity for increased self-reliance will, to a large extent, depend on the nation's capacity to provide for a meaningful and culturally satisfactory life at what for a long period inevitably will have to be a relatively low level of per capita income.

Similarly the social cohesion of these nations will depend on the gradual transformation of traditional social structures into modern communities, in the urban as well as in the rural setting, capable of cultural self-entertainment and enjoyment. The effort to stimulate creative participation in the arts, traditional as well as modern, and to use the communications media toward these ends—all of which may have important employment effects—will also fall to an important extent on the universities, especially in terms of experimentation.

None of the suggestions made in this paper could be implemented in isolation. University development is not only determined by the university's own capabilities, but also by factors like the quality of the secondary school system, the provision of adequate sub-professional skills on both the second as well as tertiary levels (polytechnical schools). It is also influenced by the future expectation of parents and by political constraints, as well as by the overall reward system prevalent in our society. These problems, however, lie outside the limited scope of this paper.

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The International Council for Educational Development (ICED) is an international non-profit association of persons with a common concern for the future of education and its role in social and economic development.

ICED's major interests are strategies of education for development and the modernization and management of systems of higher education. In each area, ICED's purposes are to identify and analyze major educational problems shared by a number of countries, to generate policy recommendations, and to provide consultation, on request, to international and national organizations.

ICED's activities are directed by James A. Perkins, chief executive officer and chairman of an international board. Philip H. Coombs is vice chairman. The headquarters office is in New York City.

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